CDM

1331 17th Street, Suite 1100
Denver, Colorado 80202
tel: 303 295-1237
fax: 303 295-1895

For SFRC

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Mr. Jim Christiansen
Remedial Project Manager
U.S. Environmental Protection Agency
Region VIII, Mail Code (8EPA-SR)
999 18th Street, Suite 500
Denver, Colorado 80202-2405

Subject: Contaminant Screening Study, Final Technical Memorandum

Dear Mr. Christiansen:

CDM is pleased to submit the Final Technical Memorandum for the Contaminant Screening Study. If you have any questions or concerns, please call me at (720) 264-1116.

Very truly yours,

E-Signed by Jeff G. Montera
VERIFY authenticity with ApproveIt

Jeff Montera
Project Manager
CDM Federal Programs Corporation

cc: Peggy Churchill, EPA, Denver
Mike Cirian, EPA, Libby
John McGuiggin, Volpe, Cambridge
Courtney Zamora, Volpe, Libby
Tim Wall, CDM, Cambridge
Jean O'Brien, CDM, Cambridge
Jeff Montera, CDM, Denver
Terry Crowell, CDM, Libby

Contaminant Screening Study
Final Technical Memorandum
Libby Asbestos Site, Operable Unit 4
Libby, Montana

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Prepared for:

U.S. Department of Transportation
Research and Special Programs Administration
John A. Volpe National Transportation Systems Center
Environmental Engineering Division, DTS-33
55 Broadway, Kendall Square
Cambridge, Massachusetts 02142

Prepared by:

CDM
1331 17th Street, Suite 1100
Denver, Colorado 80202

Contaminant Screening Study
Technical Memorandum
Final Summary
Libby Asbestos Site, Operable Unit 4
Libby, Montana

Prepared by: Nicole Bielecki Date: 1/25/06
Nicole Bielecki
CDM Project Scientist

Reviewed by: Date: 1/25/06
Geoff McKenzie, P.E.
CDM Project Engineer

Reviewed by: Date: 1/25/06
Jeff Montera
CDM Project Manager/Quality Assurance Coordinator

Approved by: Date: 1/30/06
Jim Christiansen
EPA Region 8 Remedial Project Manager

CDM

Contents

Acronyms

CSF	close-support facility
CSS	contaminant screening study
EPA	U.S. Environmental Protection Agency
FS	feasibility study
GIS	geographic information system
Grav	gravimetric
IFF	information field form
LA	Libby amphibole
ND	non-detect
NIOSH	National Institute for Occupational Safety and Health
OU	operable unit
PE	performance evaluation
PLM	polarized light microscopy
RI	remedial investigation
ROD	record of decision
s/cm^2	structures per square centimeter
SAP	sampling and analysis plan
SUA	specific use area
VE	visual area estimation

Section 1
Introduction

This technical memorandum summarizes the existing results of the Contaminant Screening Study (CSS), conducted as part of the Remedial Investigation (RI), at the Libby Asbestos Site. The CSS is a discrete part of the RI intended to collect information about all properties in the Libby operable unit (OU) 4 study area. The CSS was initially designed in 2002 and was modified slightly in 2003. Field sampling was completed primarily in 2002 and 2003, but additional properties were screened in 2004 and 2005. Properties in the OU4 study area that have not been previously investigated (e.g. properties for which access was denied or owners could not be located) will be revisited in the future as resources permit.

1.1 Background

Initial U.S. Environmental Protection Agency (EPA) investigations at the Libby Asbestos Site include the Phase I and Phase II sampling programs. The Phase I sampling program, initiated in early 2000, was designed as a rapid pilot-scale investigation to:

- Determine whether airborne asbestos levels in Libby required time-critical action to protect public health
- Quantify asbestos levels in potential source materials
- Identify appropriate analytical methods to screen for and quantify asbestos

The Phase II sampling program began in March 2001 and was designed in part to provide human exposure estimates by collecting air samples during various activities.

Through the Phase I and II programs and additional information concerning exposures and health effects EPA determined:

- Exposure to Libby amphibole (LA) asbestos is a threat to human health.
- Release of respirable LA occurs when source materials are disturbed.
- Source materials include vermiculite insulation, vermiculite products and process wastes, and contaminated soils.
- Contaminated indoor dust found in commercial and residential properties is a potential exposure pathway.
- There is widespread presence of LA throughout the Libby area.

Based upon these conclusions and other considerations, EPA determined it was necessary to conduct time critical removal actions at the Libby Asbestos Site (EPA 2001, 2002). Initial removal actions focused on larger source areas such as the former

screening plant, the former export plant, Plummer Elementary, Libby High School, Libby Middle School, and several additional residential properties. In 2002, EPA expanded removal actions to encompass potentially affected residential and commercial properties across the Libby area.

1.2 Objective of the Contaminant Screening Study

The expanding nature of the removal action cleanup, coupled with the proposed listing of the Site on the National Priorities List, prompted EPA to begin the RI for the Site. Several factors suggested that *all* properties in the area, as opposed to a limited subset, would require some level of investigation. Most importantly, the site conceptual model suggested that the dominant mechanism for contaminant transport was "random" human activity involving the use and dispersion of vermiculite products or wastes at numerous locations throughout the area. Any property, based upon its past uses, could be affected and none could be excluded based upon geographic location alone. Considering the size of the area of concern (approximately 190 square miles), the number of properties to be evaluated (more than 4,000), and the time-sensitive nature of the situation in Libby, development of a cost-effective and timely characterization approach was important. The CSS, as an initial step in the RI, was designed to meet this need.

The general goal of the CSS was, and continues to be, to provide information about the presence of LA source materials at individual residential and commercial properties. Based upon that information and other criteria [primarily the May 2002 Action Memorandum Amendment (EPA 2002) and the Draft Final Libby Asbestos Site Residential/Commercial Action Level and Clearance Criteria Technical Memorandum (EPA 2003)], EPA sought to classify each property as (1) requiring immediate cleanup, (2) potentially impacted, but needing additional information to determine if cleanup is necessary, and (3) likely not impacted or requiring cleanup.

1.3 Continuing Remedial Investigation Activities

EPA has used the results of the CSS to help determine which properties require time critical removal action cleanup as well as to investigate the nature and extent of contamination across the Site. Concurrent with the CSS and removal action cleanup, EPA also began and continues several other RI-related activities. These include, but are not limited to, (1) the Performance Evaluation (PE) Study, intended to assess and develop analytical methods for detection and quantification of LA in soil, (2) development of screening level risk estimates, (3) review and analysis of data trends seen in Libby, (4) review and analysis of asbestos related data, information, and science outside of Libby, (5) collection of indoor dust samples (6) development and refinement of the Libby 2 database and associated geographic information system (GIS) applications that store information regarding sample locations, analytical results, and other data, and (7) collection of additional information necessary for the Baseline Risk Assessment, RI, and feasibility study (FS).

Section 2
Contaminant Screening Study Approach

The CSS used a combination of property reconnaissance (i.e., visual inspections and verbal interviews) and soil sampling to screen properties for the presence of LA sources. Sources include vermiculite products and wastes, vermiculite-containing building materials, and contaminated soils. Inspection and sampling efforts focused on areas of the property where vermiculite products or wastes were most likely to be encountered (e.g., attic insulation and garden soil) and where the potential disturbance and exposure to LA was most likely (e.g., near-surface soils). For some properties, follow-up indoor dust sampling was conducted and is discussed below.

Property reconnaissance and sampling followed the procedures outlined in the CSS Sampling and Analysis Plan (SAP) (CDM 2002a) or CSS SAP, Revision 1 (CDM 2003b). Minor deviations from or changes to the rationale and approach described in the CSS SAP have been documented in the RI SAP (CDM 2003c).

There were also several "unique" properties that were identified and sampled as part of the CSS. These properties were generally large or complex, and SAP Addendums were generated for some of the properties to supplement the original CSS SAP. Of the unique properties for which a SAP Addendum was not generated, all CSS activities were conducted in accordance with the CSS SAP, Revision 1 (CDM 2003b), and Final Draft Response Action Work Plan (2003h). The unique properties currently identified are listed below, referenced with their site-specific sampling plan, if applicable.

- Cemetery Park Ball Fields (2002b);
- The former Stimson Lumber Mill (2002c);
- Libby Drive-In Theater (2002d);
- J. Neils Park and State Highway 37 (2003d);
- Riverside Park (2003e);
- The dirt alleys within the City of Libby (2003g);
- The public compost pile at the Lincoln County Landfill;
- St. John's Lutheran Hospital- Helipad and Rehabilitation Center;
- Cabinet View Country Club (2004b);
- The Johnston Acres area of Libby (2005a);
- A former concrete plant located on Highway 2 (2005e); and
- A former landfill (2005f).

Individual results memoranda were prepared for each of these unique properties where samples were collected. Sampling for the former concrete plant and former landfill are scheduled for 2006. Other unique properties may be identified and sampled in the future as necessary. The results memoranda that have been finalized to date include:

- Riverside Park (2003f);
- The public compost pile at the Lincoln County Landfill (2004c);
- Cabinet View Country Club (2005b);
- Cemetery Park Ball Fields (2005c);
- The dirt alleys within the City of Libby (2005d);
- J. Neils Park and State Highway 37 (2005g); and
- Libby Drive-In Theater (2005h).

The results memoranda that have not been finalized to date include:

- St. John's Lutheran Hospital Helipad- Helipad and Rehabilitation Center;
- The former Stimson Lumber Mill; and
- The Johnston Acres area of Libby.

2.1 Property Reconnaissance

Property reconnaissance provided for visual identification of sources of LA and systematic dialog with residents and property owners to obtain historical or anecdotal information about the property. The reconnaissance teams contacted residents, obtained signed property access agreements (Appendix A), assigned property identification data for use with GIS, photographed building(s) located on each property, inspected the property, and completed the information field forms (IFFs) (Appendix B). Property owner interviews and visual inspections were used to collect historical property information and to obtain answers to seven specific questions:

- Is there any knowledge of former miners, close relatives of miners, or any highly exposed persons living at or visiting the property?
- Is the resident, past or present, diagnosed with an asbestos-related disease?
- Does the interior have vermiculite insulation?
- Has the interior ever had vermiculite insulation?
- Are there vermiculite additives in any of the building materials?

- Are source materials present at the property?
- Where are possible outdoor LA sources located?

Following completion of the IFF, soil sample teams returned to the property and collected soil and/or dust samples.

2.2 Soil Sampling

Many of the properties in Libby were suspected to contain vermiculite products or vermiculite-related wastes as fill or soil conditioners. Therefore, samples of outdoor soils were collected at all properties to determine if LA was present and, if so, at what concentration.

After completing the verbal interview, CDM field teams sketched the exterior of the property and segregated the property into land use areas (e.g., yard, driveway, landscaped areas, garden, fill area) and zones, if applicable. It was assumed that source materials were distributed throughout areas of similar usage. Therefore, one composite sample was collected from each land use area less than or equal to 1/8 acre (approximately 5,500 square feet). Properties greater than ½ acre in size were sectioned into zones that were characterized by one composite sample per 1/8 acre area. A minimum of two and maximum of five composite soil samples were collected to characterize each property depending on site conditions (e.g., multiple land use areas, zone, etc.). The CDM field team used professional judgment in determining the number of soil samples collected and the sample locations in order to adequately characterize each property (CSS SAP, CDM 2002a).

Each composite soil sample had no more than five subsamples, but site conditions may have required fewer subsamples be collected. Yard composite samples were collected from a 0 to 1 inch depth interval, while driveways, landscaped areas, gardens, and fill areas were sampled from 0 to 6 inches. These depths were chosen based on the site conceptual model. Frequent mechanical disturbances that could result in release and exposure to LA are most likely to occur at the surface for yards (e.g., lawn mowing). However, it is assumed that frequent disturbances are likely to occur at deeper depths in gardens, and landscaped areas (e.g., rototilling and digging) (CSS SAP, CDM 2002a).

During design of the CSS, EPA theorized that identification of visible vermiculite in soil was an indicator of the presence of LA at levels of concern (CSS SAP, Appendix A, CDM 2002a); and, if vermiculite were present in any land use area, the soil would be removed. As such, soil samples were initially collected only from areas where vermiculite was *not* observed. This approach was followed throughout the 2002 field-sampling season. Prior to the 2003 field season, the CSS soil sampling approach was modified. Areas of a property were further segregated into "specific use areas" (SUAs). SUAs were defined as areas (e.g., current or former flowerbeds, current or former gardens, planters, stockpiles, play areas) that were most likely to have received vermiculite products and frequent or intense disturbances at subsurface locations. During and after 2003, *only* SUAs were not sampled if vermiculite was

observed. Yards and driveways were sampled regardless of the presence of vermiculite. This approach remains in effect.

2.3 Dust Sampling

Results from the CSS interviews and site observations were used to determine which properties warranted follow up indoor dust sampling. If a property contained either an identified source of LA (e.g., vermiculite insulation, visible vermiculite outdoors) or a history that suggested potential dust contamination (e.g., a former vermiculite worker lived in the home), it was earmarked for indoor dust sampling. Indoor dust sampling was *not* specifically a part of the CSS program, but was conducted as part of the general RI sampling or pre-design inspections. Details regarding indoor dust sampling can be found in the RI SAP (CDM 2003c), Final Draft Pre-Design Inspection Activities Work Plan (Appendix B, CDM 2003i) and other associated documents. Dust samples were analyzed using the ASTM D-5755 method. Consistent with the EPA Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum (EPA 2003), dust results are presented in units of AHERA structures per square centimeter (s/cm^2). The target analytical sensitivity is less than 1000 s/cm^2. However, if after reading up to 20 grid openings and ashing the sample an analytical sensitivity of less than 5000 s/cm^2 can not be reached the sample is voided and an additional dust sample is collected to characterize the area.

2.4 Development of Soil Analytical Methods

At the onset of the CSS, EPA recognized that existing analytical methods for detecting and measuring asbestos in soil were inadequate, especially for detection of LA at levels less than 1%. The lack of a proven analytical soil method presented a significant challenge for a number of reasons. First, exposure to contaminated soils was thought to be a significant exposure pathway. Second, outdoor soils were believed to serve as an ongoing source of contamination to indoor dust. Finally, EPA recognized that a cost-effective means of screening large numbers of residential yards was necessary.

To address these issues, EPA designed and implemented a PE Study. The objectives of the PE Study were:

- Develop PE samples of known, verified LA concentrations in soil that could be used to test the efficacy of soil analytical methods.
- Using the PE samples, evaluate multiple analytical methods and technologies to determine their suitability for detecting and measuring LA in soil at various concentrations and under conditions similar to those found at the Libby site.
- Based upon these results, develop and refine site-specific methods for detecting LA in soil.
- Based upon the results, develop a set of acceptance criteria for the PE samples.

- Use PE samples as a quality control tool for testing the performance of analytical laboratories.

The PE Study was conducted in several phases. Much of the work was conducted in 2002. While the PE Study was being conducted, soil samples collected as part of the CSS were initially held without analysis. During 2003, based upon the interim results of the PE Study, EPA began analysis of CSS soil samples using a site-specific polarized light microscopy (PLM) analytical method called PLM-Visual Area Estimation (PLM-VE) [Syracuse Research Corporation (SRC) 2003]. PLM-VE was chosen primarily because of its ability to reliably detect levels of LA in soil as low as 0.2% in a cost-effective, rapid manner. The details of the PE Study are currently being summarized in the upcoming PE Study Results Report.

2.5 Soil Sample Preparation and Analysis

During conduct of the PE Study, it was determined that sample preparation (i.e., drying, sieving, and grinding) that increased sample homogeneity also increased the ability to consistently observe LA in soil samples at concentrations less than 1%. Therefore, prior to PLM-VE analysis, all soil samples are prepared at CDM's close-support facility (CSF) in Denver in accordance with the CSF Soil Preparation Plan (CDM 2003a) or CSF Soil Preparation Plan, Revision 1 (CDM 2004a), depending on date of processing. Protocols for sample storage, equipment calibration, general housekeeping, and air monitoring were the main modifications between the two plans. No changes were made to the soil preparation plan that would affect the nature of the soil samples or their subsequent analyses.

During sample preparation, the soil is sieved to remove all material greater than ¼-inch that is unsuitable for grinding and is less likely to contain LA (coarse fraction). The remaining fine fraction is mixed and mechanically ground to a size of approximately 250 microns in diameter. The coarse fraction is analyzed using a PLM gravimetric analysis entitled PLM-Gravimetric (SRC 2003), and the fine fraction is analyzed using PLM-VE.

For the fine fraction, PLM-VE results are reported using a multi-bin system based upon visual area estimation of the amount of LA present in the field soils. This approach generates a "semi-quantitative" result that estimates the concentration range, but does not assign a single concentration value to the result. Because reference materials of known concentration are used to identify the concentration bin range, results are reported in the following units of measure: %LA (by area). The PLM-VE concentration bins are:

Bin A:	No LA detected. Bin A results are generally shown as "ND" for non-detect.
Bin B1:	LA detected, but at a level estimated to be lower than 0.2%. Bin B1 results are generally shown as "Trace."

Bin B2: LA detected at a concentration estimated to be less than 1% but greater than or equal to approximately 0.2%. Bin B2 results are generally shown as "<1%."

Bin C: LA detected at a concentration estimated to be greater than or equal to 1%. Bin C results are generally shown as "1%," "2%," etc.

For the coarse fraction, PLM-Gravimetric (PLM-Grav) analysis is used to determine if any of the larger sieved materials are LA related-materials. As the name implies, units of measure for the course fraction are given in %LA (by mass). However, the analytical sensitivity for the PLM-Grav is lower than the PLM-VE method. Additionally, unlike the semi-quantitative results generated by the PLM-VE method, the PLM-Grav method generates fully quantitative results. As such, care should be taken when comparing and contrasting analytical results between the PLM-Grav and PLM-VE methods.

In addition to samples collected in accord with the CSS Supplemental Remedial Investigation Quality Assurance Project Plan (EPA 2005), some soil samples collected as part of the Phase I investigation were retrieved from archives and reanalyzed. Approximately 70% of the 2010[1A] Phase I soil samples with non-detect results, previously analyzed using National Institute for Occupational Safety and Health (NIOSH) 9002 (NIOSH 1994), were processed at the CSF and sent for reanalysis using PLM-VE. The remaining 30% of soil samples will be analyzed as resources become available. These samples were reanalyzed with PLM-VE and processed with the associated soil preparation steps because this approach is more sensitive and reliable for detection of lower levels of LA than the NIOSH 9002 method. Phase I samples with detectable levels of LA were not reanalyzed because these results were considered sufficient for decision making purposes.

[1A] Libby 2 (12/1/05) All query-derived data is annotated with the (1) source and (A) occurrence. Detailed descriptions of the derivations can be found in Appendix C.

Section 3
Contaminant Screening Study Results

In order to maximize resources and move forward with removal action cleanup, EPA continually reevaluates CSS data as the cleanup and investigation progresses. For instance, in 2002 and 2003, before the PE study was conducted and most CSS soil samples were analyzed, EPA primarily used Phase I NIOSH 9002 PLM results to help determine which properties required soil cleanup. Later, as the sampling approach evolved, cleanup decisions were based upon a combination of visual inspection results (e.g., for SUAs) and PLM-VE sample results.

Overall, this means that the number of properties in each of the three *planning categories* discussed in Section 1.2 (require immediate cleanup, need more information, cleanup not likely) has fluctuated over time as more information became available. The results presented below reflect totals as of December 1, 2005 and are based upon criteria established in the EPA Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum (EPA 2003). It is very important to note that the numbers below are presented *only* for planning purposes during the removal action and the RI/FS phases and are *not* intended to portray the ultimate number of properties requiring cleanup or remedial action. Final decisions regarding which properties require cleanup, and to what extent, will be based upon information set forth in the future ROD for OU4.

3.1 Current Time Critical Removal Action Decision Criteria

Each property in the Libby study area may require cleanup in three general areas: the attic space, the interior living space, and outdoors. Therefore, three decisions are required for each property to determine the need for, and extent of, cleanup. Generally, investigative results from each of these areas (e.g., attic space, interior living space, and outdoors) were treated separately. That is, results may trigger cleanup in one area (e.g., attic space), but not others.

Table 3-1 outlines the current residential/commercial emergency response action levels for each area (EPA 2002). The action levels were established in the Draft Final Libby Asbestos Site Residential/Commercial Action Level and Clearance Criteria Technical Memorandum (EPA 2003). For each area, a property has to meet only *one* of the triggering action levels (as opposed to all) for that area to require cleanup. Again, it is important to note that cleanup criteria and action levels are subject to change and have been continually evaluated throughout the entire process. Final action levels, and the total number of properties requiring cleanup, will be available after the RI/FS is completed and a ROD is published.

Table 3-1 Summary Decision Matrix from Action Level and Clearance Criteria Technical Memorandum (EPA 2003)

Cleanup Decision	Location	Action Level Trigger
Time Critical Removal Action	**Indoor**	
	Attic/Walls	■ Visual confirmation of open, non-contained, or migrating vermiculite insulation
	Living Space	■ Visual confirmation of vermiculite in the indoor living space ■ Dust sample with LA concentration greater than or equal to 5,000 s/cm^2
	Outdoor	
	SUAs	■ Visual confirmation of visible vermiculite or other vermiculite-related waste products OR soil sample results greater than or equal to 1% LA (Bin C)
	Other Soil Areas	■ Soil sample result with greater than or equal to 1% LA (Bin C)
No Current Action	All locations	■ None of the above conditions are present at the property

3.2 Number of Properties and Samples

As of December 1, 2005, 4,029[2] properties have been visited as part of the CSS. Investigations were conducted at 3,673[3A] properties and 15,462[1B] soil samples were collected as a part of this investigation. To date, the majority of the CSS soil samples collected have been processed at the CSF and analyzed using PLM-VE. Dust sampling did not begin until 2003 and the majority of the samples are still pending analysis. These samples will be analyzed in the future as resources permit. However, because dust sample results are an important indicator of contamination and are a key factor in determining which planning category a property is assigned to, dust samples that have been collected and analyzed during both pre-design inspections and RI sampling are included in the presentation of results in Section 3.3. A summary of soil and dust samples and analyses by year is presented in Table 3-2.

Table 3-2 Comparison of CSS Soil and Dust Samples Collected and Analyzed Per Year[1C]

	Soil samples collected	Soil samples analyzed	Dust samples collected	Dust samples analyzed
2002	10,421	10,402	1	1
2003	3,314	3,288	3,086	1,371
2004	1,223	1,223	63	63
2005	504	397	81	48
Total	**15,462**	**15,310**	**3,231**	**1,483**

[2] Remediation Status Query (12/1/05), eLASTIC (12/5/05)
[3A] Remediation Status Query (12/1/05)
[1B] Libby 2 (12/1/05)
[1C] Libby 2 (12/1/05)

3.3 General Results

Based on the planning categories in the CSS SAP Revision 1 (CDM 2003b) and the criteria outlined in Table 3-1 above:

- **1,607**[3B] properties were categorized as *require immediate cleanup* (i.e., exhibited at least one current time critical removal action level trigger) in an indoor or outdoor location of concern.

- **827**[3C] properties were categorized as *additional information required* (i.e., conditions suggest potential contamination, but did not meet the current time critical removal action levels (EPA 2003)).

- **1,239**[3D] were categorized as *cleanup not likely required* (i.e., no emergency response triggers or other conditions suggesting contamination were observed or detected).

- **356**[4] properties were not inspected or sampled due to denials of access or other factors. EPA will attempt to sample these properties in the future as resources permit.

Detailed results for the 3,673 properties inspected and sampled are presented in Table 3-3. While this report summarizes property information gathered during the CSS, overall property characterization also incorporates soil and dust samples collected during the Phase I and/or pre-design inspections. Note that the quantities in the last ("Condition or Action Level") column are not mutually exclusive and do not add up to those in the category totals in the first ("Planning Category") column. This is because a property may exhibit several of the conditions or action levels, but can be placed into only one "Planning Category." For instance, a large number of properties with vermiculite present in the yard may *also* have soil sample results of trace or <1% (Bins B1 and B2).

Again, it is important to note that the quantities in Table 3-3 are based upon current criteria and available data. The quantities will change as additional dust samples are analyzed and may significantly change upon publication of a ROD. The results are presented for planning purposes only. Final decisions regarding which properties require cleanup, and to what extent, will be based upon information set forth in a future ROD for OU4.

[3B] Remediation Status Query (12/1/05)
[3C] Remediation Status Query (12/1/05)
[3D] Remediation Status Query (12/1/05)
[4] eLASTIC (12/5/05)

Table 3-3 Detailed Property Characterization		
Planning Category	**Area**	**Condition or Action Level**
Cleanup Required (1607 properties)	Attic/walls	▪ Visual confirmation of open, non-contained, or migrating vermiculite insulation ***(621 properties[1D])***
	Indoor living space	▪ Visual confirmation of vermiculite in the indoor living space ***(149 properties[1E])***
		▪ Dust sample results with a concentration greater than or equal to 5,000 s /cm^2 ***(76 properties[3E])***
	SUAs	▪ Visual confirmation of vermiculite or other vermiculite mine related materials or soil sample results with a concentration greater than or equal to 1% LA (Bin C) ***(1179 properties[5A])***
	Other soil areas	▪ Soil sample results with a concentration greater than or equal to 1% LA (Bin C) **(66 properties[5B])**
Remediation Pending Additional Information (827 properties)	Indoor living space	▪ Current or past resident employed at Libby vermiculite mine or other Libby processing facilities ***(798 properties[1F])***
		▪ Current or past resident diagnosed with an asbestos-related disease ***(695 properties[1G])***
		▪ Building materials containing vermiculite were observed ***(92 properties[1H])***
	Attics/walls	▪ Observation that vermiculite insulation has been previously removed but dust samples were not previously collected ***(8 properties[1I])***
		▪ Presence of vermiculite insulation in attic possible but not confirmed ***(124 properties[1J])***
	SUAs and other soil areas	▪ Vermiculite visible over large area of property ***(757 properties[3F])***
		▪ Soil sample results with a concentration less than 1% (Bin B1 or B2) ***(943 properties[3G])***
		▪ PLM-Gravimetric results indicated potential large particle LA ***(12 properties[3H])***
Remediation Not Likely Required (1239 properties)	Entire Property	▪ Vermiculite insulation not present in attic
		▪ Vermiculite insulation not present in attic in past
		▪ Any available dust results are less than 5,000 s /cm^2
		▪ No visible vermiculite in specific use areas
		▪ All soil sample results are ND (Bin A)
		▪ No vermiculite mining or processing history at property
		▪ No asbestos-related disease history
		▪ Vermiculite not used in building materials

[1D] Libby 2 (12/1/05)
[1E] Libby 2 (12/1/05)
[3E] Remediation Status Query (12/1/05)
[5A] Remediation Status Query (12/1/05), Standard Report (11/30/05)
[5B] Remediation Status Query (12/1/05), Standard Report (11/30/05)
[1F] Libby 2 (12/1/05)
[1G] Libby 2 (12/1/05)
[1H] Libby 2 (12/1/05)
[1I] Libby 2 (12/1/05)
[1J] Libby 2 (12/1/05)
[3F] Remediation Status Query (12/1/05)
[3G] Remediation Status Query (12/1/05)
[3H] Remediation Status Query (12/1/05)

3.4 Properties Remediated as of December 1, 2005

As discussed earlier, there are 1,607 properties in Libby identified as requiring remediation. As of December 1, 2005, 582[6] time critical removal actions have been completed. For more details regarding cleanup strategy and approach, see the Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum (EPA 2003) and the Final Draft Response Action Work Plan (CDM 2003h).

[6] Removal List (12/3/05)

Section 4
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Appendix A
Property Access Agreement

CDM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET, SUITE 500
DENVER, CO 80202

CONSENT FOR ENTRY AND ACCESS TO PROPERTY DURING REMOVAL ACTIVITIES

Name: _____

Address: _____
_____
_____

Phone: (home) _____
(work) _____
(cell) _____

Address of Property for which consent for access is being granted:

_____
_____
_____

Relationship to property: _____
(i.e., owner, owner's representative, etc.)

I consent to officers, employees, and authorized representatives of the United States Environmental Protection Agency (EPA) entering and having continued access to my property for the following purposes:

1. Conduct further investigations as necessary in support of removal activity planning (i.e., visual inspections and air, dust, and/or soil sampling).
2. Construction set up (i.e., fencing, containment, equipment) to support the removal of contaminated material in the forms of insulation, dust, soil and associated debris.
3. Complete restoration efforts once contaminated material has been removed.
4. Such other actions as the EPA Remedial Project Manager determines necessary to protect human health or welfare of the environment.

I realize that these actions by EPA are undertaken pursuant to its response authorities under the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended (CERCLA), 41 U.8. C Section § 9601 et seq.

I also realize that there may be loss of or damage to property during these actions. In addition, I realize EPA will be using my utilities, including heat, water and electricity.

If relocation is necessary, I realize that I will not have access to my property during removal activities for health and safety reasons. Only in the event of an emergency will I be able to request items from my home.

This written permission is given by me voluntarily with knowledge of my right to refuse and without threats or promises of any kind.
I certify that this Consent for Entry and Access to Property during Removal Activities is entered into voluntarily and constitutes an unconditional consent and grant of permission for access to the property by officers, employees and authorized representatives of EPA at reasonable times.

_____ _____
DATE **SIGNATURE**

Appendix B
Information Field Form

BD#_____

□ Soil samples collected (Date: _____)

LIBBY ASBESTOS PROJECT
Contaminant Screening Study
Primary Structure and Property Assessment Information Field Form (Primary IFF)

Field Logbook No.:_____ Page No.:_____ Site Visit Date: _____

Address:_____ Structure Description:_____

Occupant:_____ Phone Number:_____

Owner (if different than occupant):_____ Phone Number:_____

Business Name:_____

Sampling Team:_____

Field Form Check Completed by (100% of forms):_____

Screening Field Check Completed by (2% of forms): _____

Data Item	Value	Notes
HOUSE ATTRIBUTES		
Property Description	Residential Industrial Commercial	
Surrounding Land Use	Residential Industrial Commercial School Mining Other:_____	
Year of Construction	_____ Unknown	
Square Footage		
Construction Material	Wood frame Masonry/Stone Other:_____	
Number of Floors Above Ground	1 2 3 Other:_____	
Number of Rooms Per Floor Above Ground	1:____ 2:____ 3:____ Other:_____	
Basement	Yes No	
Heating Source	Wood/Coal Electric Propane/Gas Other:_____	
Heat Distribution	Forced air Radiant Other:_____	

CSS Primary Structure IFF (continued)

Address:_____ BD# _____

Data Item	Value	Notes
OCCUPANT INFORMATION		
Was the residence/building remodeled?	Yes No If yes, When (years): <2 2-5 >5 Where: Attic Living Areas Garage Basement Other:_____	
Has resident/business purchased any Libby vermiculite materials from W.R. Grace in the past?	Yes No	
Has the property at this location been used for a for-profit enterprise of distributing, treating, storing, or disposing of Libby vermiculite?	Yes No	
CONTAMINANT SCREENING STUDY ASSESSMENT		
Occupant Information	❒ Verbal Interview Complete:_____	
Is there any knowledge of former miners, close relatives of miners, or any highly exposed persons living or visiting the property?	Yes No Unknown	If unknown, why?
Is the resident, past or present, diagnosed with an asbestos-related disease?	Yes No Unknown	If unknown, why?
Indoor Information	❒ Indoor Visual Inspection Complete:_____	
Does the interior have vermiculite attic insulation?	Yes No Unknown	If unknown, why?
Did the interior ever have vermiculite attic insulation? NA applies if attic currently has VCI	Yes No Unknown NA	If unknown, why?
Are there vermiculite additives in any of the building materials?	Yes No Unknown	If unknown, why? Type and location of building material:

CSS Primary Structure IFF (continued)

Address:_____ BD# _____

Data Item	Value	Notes
Location of indoor vermiculite (circle all that apply)	Attic Walls Crawl Space None Visual in Living Space: Basement, Ground Floor, Second Floor, Attached Garage Other:_____	If in living space, provide specific location:
Outdoor Information	❒ Outdoor Visual Inspection Complete:_____	
Location of outdoor vermiculite (circle all that apply)	Driveway Flowerbed Garden Yard Former Flowerbed Former Garden Stockpile None Other_____	
Overall Assessment	❒ Reconnaissance (Verbal Interview, Indoor, Outdoor Inspection) Complete:_____	
Are primary source materials present at the property?	Yes No	
Where are primary source materials located?	Inside Outside Both NA	NA applies if no primary source materials are located at the property.

ADDITIONAL INFORMATION (Note any partial access or sample collection issues)_____

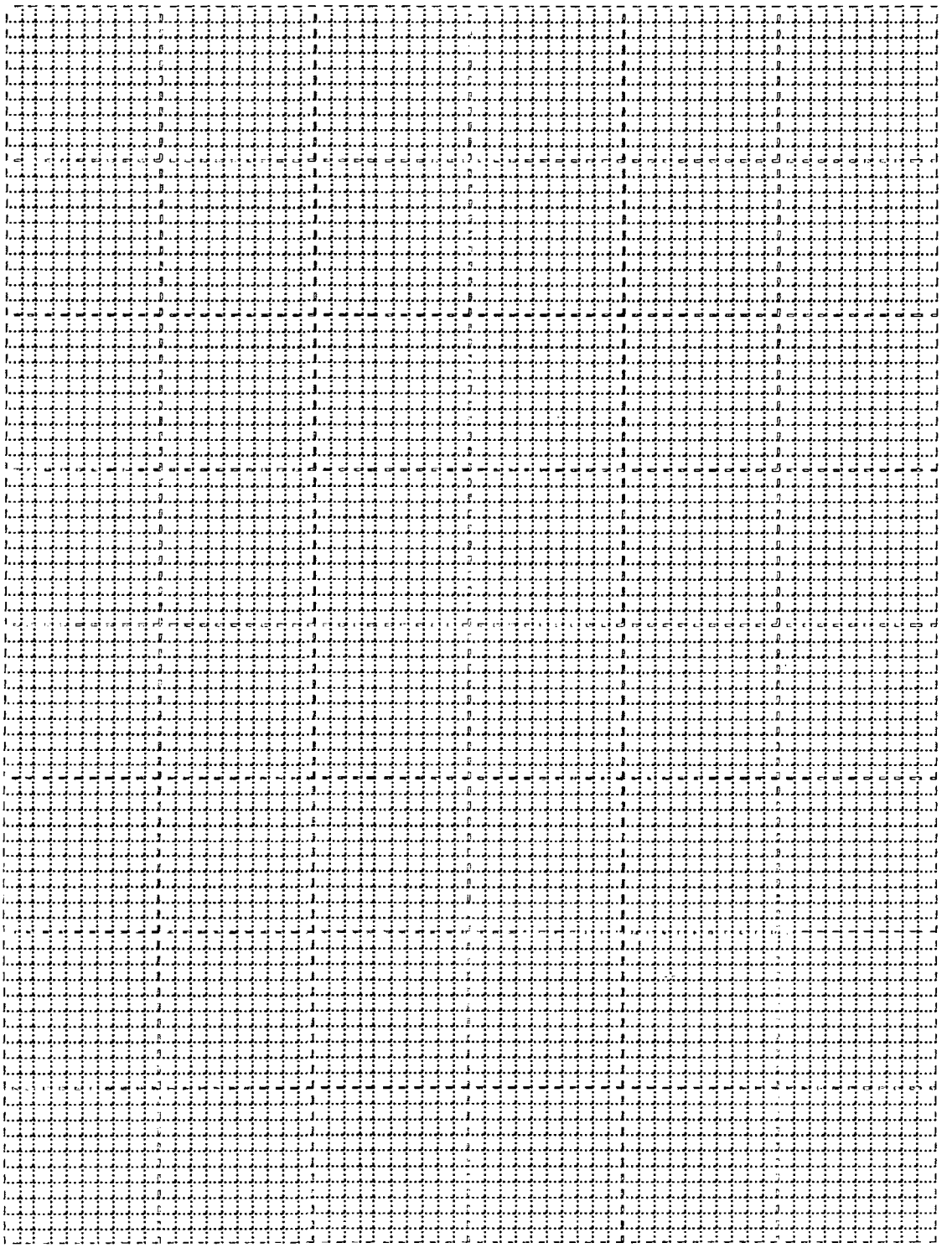
CSS Primary Structure IFF (continued)

Address:_____ BD# _____

FIELD DIAGRAM OF PROPERTY

Identify important features (i.e. drainage, trees, gardens, structures, flowerbeds, utility poles, known underground utilities, suspected Libby amphibole source areas, sample locations, etc). **Include north arrow.**

NOT TO SCALE



Appendix C
Documentation of Database Queries and Data Reduction

General Query Request and Secondary Source References

Foot note	Root Source	Secondary Source	Source Date	Query request
1A	Libby 2	050912_01CSReportData-rev02	12/1/2005	All non-detect Phase 1 samples analyzed by PLM-9002, that were ground and reanalyzed with PLM-VE.
1B	Libby 2	050818_01CSStats-rev02	12/1/2005	All soil and dust samples collected with CS- prefix segregated by year.
1C	Libby 2	050818_01CSStats-rev02	12/1/2005	All soil and dust samples analyzed with CS- prefix segregated by year.
1D	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 4: Does the attic contain vermiculite insulation?
1E	Libby 2	050912_01CSReportData-rev02	12/1/2005	Questions 17-20: Vermiculite insulation identified in the basement, ground floor, second floor or attached garage?
1F	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 2: Knowledge of former miners, or other highly exposed persons living or visiting property?
1G	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 3: Past or present resident diagnoses with an asbestos-related disease?
1H	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 6: Vermiculite additivies in any of the building materials?
1I	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 4: Does the attic contain vermiculite insulation? Question 5: Did the attic ever contain vermiculite insulation? Identify properties where dust samples have not been collected.
1J	Libby 2	050912_01CSReportData-rev02	12/1/2005	Question 4: Does the attic contain vermiculite insulation?
2	Libby 2, eLASTIC	Remediation Status Query, 050818_01CSStats-rev02	12/1/2005	Total number of properties surveyed, and number of properties where 5 attempts have been made to contact the owner, or admittance has been refused by the owner
3A	Libby 2	Remediation Status Query	12/1/2005	Total number of properties surveyed
3B	Libby 2	Remediation Status Query	12/1/2005	Number of properties requiring remediation
3C	Libby 2	Remediation Status Query	12/1/2005	Number of properties pending remediation
3D	Libby 2	Remediation Status Query	12/1/2005	Number of properties not likely requiring remediation
3E	Libby 2	Remediation Status Query	12/1/2005	Rule 5: Analytical dust result greater than 5,000 s/cm2
3F	Libby 2	Remediation Status Query	12/1/2005	Rule 2:Vermiculite visible over large area of property
3G	Libby 2	Remediation Status Query	12/1/2005	Rule 9: Analytical soil result less than 1%
3H	Libby 2	Remediation Status Query	12/1/2005	Rule 8: PLM-Gravimetric results indicated potential large particle LA
4	eLASTIC	050818_01CSStats-rev02	12/5/2005	Number of properties where 5 attempts have been made to contact the owner, or admittance has been refused by the owner
5A	Libby 2	Remediation Status Query, Standard Report	12/1/05 11/30/05	Rule 7: Vermiculite in a specific use area, Rule 6: Analytical soil result greater than or equal to 1%
5B	Libby 2	Remediation Status Query, Standard Report	12/1/05 11/30/05	Rule 6: Analytical soil result greater than or equal to 1%
6	Removal List		12/3/2005	Identify all properties completed since 2001, including modification made to the property count based on the magnitude of the remediation.

Technical Details of Data Reduction and SQL Codes

Foot note	Details of Data Analysis	Application Name/Microsoft Access SQL Code
1A	No special investigations conducted	SELECT Phase19002NDImport.IndexID FROM Phase19002NDImport WHERE (((Phase19002NDImport.Method)="PLM-9002") AND ((Phase19002NDImport.LABin)="A")) GROUP BY Phase19002NDImport.IndexID HAVING (((Phase19002NDImport.IndexID) Like "I-*" Or (Phase19002NDImport.IndexID) Like "e-*"));
		SELECT Phase19002NDImport.IndexID, Phase19002NDImport.Method FROM Phase19002NDImport INNER JOIN 050912_072Phase19002NDqtot ON Phase19002NDImport.IndexID = [050912_072Phase19002NDqtot].IndexID GROUP BY Phase19002NDImport.IndexID, Phase19002NDImport.Method HAVING (((Phase19002NDImport.Method)="plm-ve"));
		SELECT Phase19002NDImport.IndexID, Phase19002NDImport.ParentID, Phase19002NDImport.Method FROM Phase19002NDImport INNER JOIN 050912_072Phase19002NDqtot ON Phase19002NDImport.ParentID = [050912_072Phase19002NDqtot].IndexID GROUP BY Phase19002NDImport.IndexID, Phase19002NDImport.ParentID, Phase19002NDImport.Method HAVING (((Phase19002NDImport.Method)="plm-ve"));
		SELECT IndexID FROM 050912_074Phase1PLMVEqtot UNION SELECT ParentID From 050912_076CSPLMVEqtot;
		SELECT Count([050912_072Phase19002NDqtot].IndexID) AS Phase1PLM9002ND, Count([050912_077PLMVEquni].IndexID) AS ReanalyzedAsPLMVE FROM 050912_077PLMVEquni RIGHT JOIN 050912_072Phase19002NDqtot ON [050912_077PLMVEquni].IndexID = [050912_072Phase19002NDqtot].IndexID;
		SELECT [050912_072Phase19002NDqtot].IndexID AS [Phase1PLM9002ND-not reanalyzed] FROM 050912_077PLMVEquni RIGHT JOIN 050912_072Phase19002NDqtot ON [050912_077PLMVEquni].IndexID = [050912_072Phase19002NDqtot].IndexID GROUP BY [050912_072Phase19002NDqtot].IndexID, [050912_077PLMVEquni].IndexID HAVING ((([050912_077PLMVEquni].IndexID) Is Null));
1B	17 samples were identified as not being used by the field and CSF sample coordinators. These were eliminated from the total number of samples collected.	SELECT dbo_tblSample.IndexID, Year([SampleDateBegin]) AS SampleYear, dbo_refSampleMedia.SampleMediaDesc FROM ((dbo_tblSample INNER JOIN (dbo_refSampleMatrix INNER JOIN dbo_refSampleMedia ON dbo_refSampleMatrix.SampleMediaID = dbo_refSampleMedia.SampleMediaID) ON dbo_tblSample.SampleMatrixID = dbo_refSampleMatrix.SampleMatrixID) INNER JOIN dbo_admnSampleTracking ON dbo_tblSample.IndexID = dbo_admnSampleTracking.IndexID) INNER JOIN dbo_refSampleStatus ON dbo_admnSampleTracking.SampleStatusID = dbo_refSampleStatus.SampleStatusID WHERE ((((dbo_tblSample.IndexID) Like "cs*") AND ((dbo_tblSample.SampleDateBegin) Between #1/1/2002# And #12/1/2005#) AND ((dbo_refSampleStatus.SampleStatusDesc)<>"rejected")) GROUP BY dbo_tblSample.IndexID, Year([SampleDateBegin]), dbo_refSampleMedia.SampleMediaDesc;
		SELECT [050818_010CSSampleCountqtot].SampleMediaDesc, [050818_010CSSampleCountqtot].SampleYear, Count([050818_010CSSampleCountqtot].IndexID) AS CountOfIndexID FROM 050818_010CSSampleCountqtot GROUP BY [050818_010CSSampleCountqtot].SampleMediaDesc, [050818_010CSSampleCountqtot].SampleYear ORDER BY [050818_010CSSampleCountqtot].SampleMediaDesc, [050818_010CSSampleCountqtot].SampleYear;
1C	17 samples were identified as being analyzed but not yet uploaded to the results server yet; 19 samples were resent for analysis. These samples were added to the total number of samples analyzed.	SELECT dbo_refSampleMedia.SampleMediaDesc, dbo_tblSample.IndexID AS Samples, Year([SampleDateBegin]) AS SampleYear FROM (dbo_tblSample INNER JOIN (dbo_refSampleMatrix INNER JOIN dbo_refSampleMedia ON dbo_refSampleMatrix.SampleMediaID = dbo_refSampleMedia.SampleMediaID) ON dbo_tblSample.SampleMatrixID = dbo_refSampleMatrix.SampleMatrixID) INNER JOIN dbo_tblAnalysis ON dbo_tblSample.IndexID = dbo_tblAnalysis.IndexID WHERE ((((dbo_tblSample.IndexID) Like "cs*") AND ((dbo_tblSample.SampleDateBegin) Between #1/1/2002# And #12/1/2005#)) GROUP BY dbo_refSampleMedia.SampleMediaDesc, dbo_tblSample.IndexID, Year([SampleDateBegin]);
		SELECT [050818_020CSSamplesAnalyzedCountqtot].SampleMediaDesc, [050818_020CSSamplesAnalyzedCountqtot].SampleYear, Count([050818_020CSSamplesAnalyzedCountqtot].Samples) AS CountOfSamples FROM 050818_020CSSamplesAnalyzedCountqtot GROUP BY [050818_020CSSamplesAnalyzedCountqtot].SampleMediaDesc, [050818_020CSSamplesAnalyzedCountqtot].SampleYear ORDER BY [050818_020CSSamplesAnalyzedCountqtot].SampleMediaDesc, [050818_020CSSamplesAnalyzedCountqtot].SampleYear;

1D	Counted the number of properties where "yes" was indicated for vermiculite insulation in the attic	TRANSFORM First(dbo_refAnswer.AnswerDesc) AS FirstOfAnswerDesc SELECT dbo_refPropertyGroup.LocationPropertyGroupID, dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_tblLocationSurvey.SurveyDate FROM ((dbo_refPropertyGroup INNER JOIN (dbo_tblLocationSurvey INNER JOIN dbo_tblLocation ON dbo_tblLocationSurvey.LocationIDSeqN = dbo_tblLocation.LocationIDSeqN) ON dbo_refPropertyGroup.LocationPropertyGroupID = dbo_tblLocation.LocationPropertyGroupID) INNER JOIN dbo_refQuestion ON dbo_tblLocationSurvey.QuestionID = dbo_refQuestion.QuestionID) INNER JOIN dbo_refAnswer ON dbo_tblLocationSurvey.AnswerID = dbo_refAnswer.AnswerID WHERE (((dbo_refQuestion.QuestionID)=2 Or (dbo_refQuestion.QuestionID)=3 Or (dbo_refQuestion.QuestionID)=4 Or (dbo_refQuestion.QuestionID)=5 Or (dbo_refQuestion.QuestionID)=6 Or (dbo_refQuestion.QuestionID) Between 17 And 20)) GROUP BY dbo_refPropertyGroup.LocationPropertyGroupID, dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_tblLocationSurvey.SurveyDate ORDER BY dbo_refPropertyGroup.LocationPropertyGroupID PIVOT [dbo_refquestion].[QuestionID] & ". " & [QuestionDesc];
1E	73 properties were identified with visual solely in the basement; 60 were identified with visual solely on the ground floor; 7 were identified with visual solely on the second floor; 2 were identified with visual solely in the attached garage; 7 properties had visual in a combination of living spaces	
1F	Counted the number of properties where "yes" was indicated for knowledge of former miners, etc.	
1G	Counted the number of properties where "yes" was indicated for knowledge of asbestos-related diseases relative to the property	
1H	Counted the number of properties where "yes" was indicated for vermiculite in building materials	
1I	No special investigations conducted	SELECT dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_refPropertyGroup.LocationPropertyGroupID, Sum(IIf([SampleMediaDesc]="Dust",1,0)) AS Dust FROM dbo_refPropertyGroup INNER JOIN ((((dbo_refSampleMatrix INNER JOIN dbo_refSampleMedia ON dbo_refSampleMatrix.SampleMediaID = dbo_refSampleMedia.SampleMediaID) INNER JOIN dbo_tblSample ON dbo_refSampleMatrix.SampleMatrixID = dbo_tblSample.SampleMatrixID) INNER JOIN dbo_tblLocation ON dbo_tblSample.LocationIDSeqN = dbo_tblLocation.LocationIDSeqN) ON dbo_refPropertyGroup.LocationPropertyGroupID = dbo_tblLocation.LocationPropertyGroupID WHERE ((([dbo_refPropertyGroup.LocationPropertyGroupCity]="lobby")) GROUP BY dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_refPropertyGroup.LocationPropertyGroupID ORDER BY dbo_refPropertyGroup.LocationPropertyGroupDesc; TRANSFORM First(dbo_refAnswer.AnswerDesc) AS FirstOfAnswerDesc SELECT dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_refPropertyGroup.LocationPropertyGroupID, dbo_tblLocationSurvey.SurveyDate, [050912_053DustCollectedqlot] Dust FROM ((((dbo_refSampleGroup INNER JOIN (dbo_refPropertyGroup INNER JOIN dbo_tblLocation ON dbo_refPropertyGroup.LocationPropertyGroupID = dbo_tblLocation.LocationPropertyGroupID) ON dbo_refSampleGroup.LocationSampleGroupID = dbo_tblLocation.LocationSampleGroupID) INNER JOIN dbo_tblLocationSurvey ON dbo_tblLocation.LocationIDSeqN = dbo_tblLocationSurvey.LocationIDSeqN) INNER JOIN dbo_refQuestion ON dbo_tblLocationSurvey.QuestionID = dbo_refQuestion.QuestionID) INNER JOIN dbo_refAnswer ON dbo_tblLocationSurvey.AnswerID = dbo_refAnswer.AnswerID) INNER JOIN 050912_053DustCollectedqlot ON dbo_refPropertyGroup.LocationPropertyGroupID = [050912_053DustCollectedqlot].LocationPropertyGroupID WHERE ((([dbo_tblLocationSurvey.QuestionID]=5 Or ([dbo_tblLocationSurvey.QuestionID]=4) AND ([dbo_refPropertyGroup.LocationPropertyGroupCity]="lobby")) GROUP BY dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_refPropertyGroup.LocationPropertyGroupID, dbo_tblLocationSurvey.Su ORDER BY dbo_refPropertyGroup.LocationPropertyGroupDesc PIVOT dbo_refquestion.QuestionID & " " & [QuestionDesc]; SELECT [050912_054DustAndSurveyqxtb].LocationPropertyGroupDesc, [050912_054DustAndSurveyqxtb].LocationPropertyGroupID, [050912_054DustAndSurveyqxtb].SurveyDate, [050912_054DustAndSurveyqxtb].Dust, [050912_054DustAndSurveyqxtb].[4 Does the interio have Zonolite attic insulation?], [050912_054DustAndSurveyqxtb].[5 Did the interior ever have Zonolite attic insulation?] FROM 050912_054DustAndSurveyqxtb WHERE (([050912_054DustAndSurveyqxtb].Dust)>0) AND (([050912_054DustAndSurveyqxtb].[4 Does the interior have Zonolite attic insulation?]="no") AND ([050912_054DustAndSurveyqxtb].[5 Did the interior ever have Zonolite attic insulation?]="yes")) ORDER BY [050912_054DustAndSurveyqxtb].LocationPropertyGroupDesc;
1J	Counted the number of properties where "unknown" was indicated for vermiculite insulation in the attic	TRANSFORM First(dbo_refAnswer.AnswerDesc) AS FirstOfAnswerDesc SELECT dbo_refPropertyGroup.LocationPropertyGroupID, dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_tblLocationSurvey.SurveyDate FROM ((dbo_refPropertyGroup INNER JOIN (dbo_tblLocationSurvey INNER JOIN dbo_tblLocation ON dbo_tblLocationSurvey.LocationIDSeqN = dbo_tblLocation.LocationIDSeqN) ON dbo_refPropertyGroup.LocationPropertyGroupID = dbo_tblLocation.LocationPropertyGroupID) INNER JOIN dbo_refQuestion ON dbo_tblLocationSurvey.QuestionID = dbo_refQuestion.QuestionID) INNER JOIN dbo_refAnswer ON dbo_tblLocationSurvey.AnswerID = dbo_refAnswer.AnswerID WHERE (((dbo_refQuestion.QuestionID)=2 Or (dbo_refQuestion.QuestionID)=3 Or (dbo_refQuestion.QuestionID)=4 Or (dbo_refQuestion.QuestionID)=5 Or (dbo_refQuestion.QuestionID)=6 Or (dbo_refQuestion.QuestionID) Between 17 And 20)) GROUP BY dbo_refPropertyGroup.LocationPropertyGroupID, dbo_refPropertyGroup.LocationPropertyGroupDesc, dbo_tblLocationSurvey.SurveyDate ORDER BY dbo_refPropertyGroup.LocationPropertyGroupID PIVOT [dbo_refquestion].[QuestionID] & " " & [QuestionDesc];
2	Counted total number of properties surveyed (Remediation Status Query) (3673)	Remediation Status Query
	Counted the number of properties where access was denied or contact was not made (eLASTIC) (356); Combined two totals	SELECT refPropertyStatus.PropertyStatusValue, Year([DateNotified]) AS StatusYear, Count(tblPropertyStatus.DPIN) AS CountOfDPIN FROM refPropertyStatus INNER JOIN tblPropertyStatus ON refPropertyStatus.PropertyStatusID = tblPropertyStatus.PropertyStatusID WHERE (((refPropertyStatus.PropertyStatusType)="access") AND ((tblPropertyStatus.DateNotified) Between #1/1/2002# And #12/1/2005#)) GROUP BY refPropertyStatus.PropertyStatusValue, Year([DateNotified]) HAVING (((refPropertyStatus.PropertyStatusValue)="denied" Or (refPropertyStatus.PropertyStatusValue)="5 attempts"));

3A	Counted total number of properties surveyed, eliminated Individual #82, and second occurrence of Individual #88	Remediation Status Query
3B	Counted number of properties where remediation need is "required," eliminated Individual #82, and second occurrence of Individual #88	Remediation Status Query
3C	Counted number of properties where remediation need is "pending"	Remediation Status Query
3D	Counted number of properties where remediation need is "null"	Remediation Status Query
3E	Counted number of properties where remediation need contains "Rule5", eliminated Individual #82, and second occurrence of Individual #88, as well as three properties whose sensitivity is greater than 5,000 S/cm2 (not the concentration)	Remediation Status Query
3F	Counted number of properties where remediation need contains "Rule2"	Remediation Status Query
3G	Counted number of properties where remediation need contains "Rule9", eliminated Individual #82, and second occurrence of Individual #88	Remediation Status Query
3H	Counted number of properties where remediation need contains "Rule8", eliminated second occurrence of Individual #88	Remediation Status Query
4	No special investigations conducted	SELECT refPropertyStatus.PropertyStatusValue, Year([DateNotified]) AS StatusYear, Count(tblPropertyStatus.DPIN) AS CountOfDPIN FROM refPropertyStatus INNER JOIN tblPropertyStatus ON refPropertyStatus.PropertyStatusID = tblPropertyStatus.PropertyStatusID WHERE (((refPropertyStatus.PropertyStatusType)="access") AND ((tblPropertyStatus.DateNotified) Between #1/1/2002# And #12/1/2005#)) GROUP BY refPropertyStatus.PropertyStatusValue, Year([DateNotified]) HAVING (((refPropertyStatus.PropertyStatusValue)="denied" Or (refPropertyStatus.PropertyStatusValue)="5 attempts")).
5A	Counted number of properties where remediation need contains "Rule7" (1159); Counted number of properties where remediation need contains "Rule6" eliminated Individual #82, and second occurrence of Individual #88 (79)	Remediation Status Query
	Of the 79 remaining properties, 14 were identified as having soil samples ≥1% and were designated as an SUA in the SampleGroup or Location Description of the standard report; 6 were identified as having multiple soil samples ≥1% from both an SUA as well as a yard area; Combined properties with visual in an SUA with the number of properties where soils ≥1% were collected from an SUA or a combination of SUA and yard	Standard Report

	Counted number of properties where remediation need contains "Rule6", eliminated Individual #82, and second occurrence of Individual #88 (79)	Remediation Status Query
5B	Of the 79 remaining properties, 60 were identified as having soil samples ≥1% and were not designated as an SUA in the SampleGroup or Location Description of the standard report; 6 were identified as having multiple soil samples ≥1% from both an SUA as well as a yard area; Combined the number of properties where soils ≥1% were not collected from an SUA with the properties where soils ≥1% were collected from a combination of SUA and yard	Standard Report
6	No special investigations conducted	N/A